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Atty. Docket No. 10274-1-1

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of ) Examiner: A. Oberley  
Thomas G. Zimmerman, et al. ) Art Unit No. 266  
Serial No. 07/317,107 )  
Filed: February 28, 1989 )  
For: COMPUTER DATA ENTRY ) SUPPLEMENTAL DECLARATION  
AND MANIPULATION ) OF THOMAS G. ZIMMERMAN AND  
APPARATUS AND METHOD ) JARON LANIER

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Hon. Commissioner of Patents and Trademarks

Washington, D. C. 20231

Sir:

The undersigned, Thomas G. Zimmerman and Jaron Lanier,  
hereby declare that:

1. The submission of Exhibits A-D received in the Patent Office on January 24, 1990 describe demonstrations of working embodiments of the subject matter disclosed and claimed in U.S. patent application Serial No. 07/317,107, which is a continuation of U.S. patent application Serial No. 07/026,930, now abandoned.

2. Exhibit A is a copy of an article which appeared in U.S.A. Today on June 26, 1986. It is believed that the article entitled "White Glove Has Computer in Palm of Hand" reports on a demonstration made by inventor Jaron Lanier to a reporter of that newspaper. The article specifically refers to a

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cotton glove which allows the user to give a computer command by merely moving the user's hand. If the user's hand (and glove) moves left, then a cursor which resembles the hand also moves left. If the hand is clenched, the cursor-hand correspondingly grasps the virtual object aimed for.

3. Exhibit B is a copy of an article which appeared in Computer Entertainer magazine in July 1986. That article corroborates the events which occurred at the consumer electronics show referred to in our Declaration filed in the Patent Office on January 2, 1990. It is believed that the article, entitled "Point and Command," reports on a demonstration made by Assignee VPL Research, Inc. at the consumer electronics show. Inventor Jaron Lanier made the actual demonstration. The article specifically refers to a glove worn by a computer user wherein the user pretends to pick up and drop an "imaginary" icon, and an on-screen glove mimics the exact movements of the user's hand, thus picking up and dropping a corresponding virtual object.

4. Exhibit C is a copy of an article which appeared in The Institute magazine in August 1986, and it is believed that it describes further demonstrations made at the consumer electronics show mentioned in our previous Declaration. The demonstrations were made by inventor Jaron Lanier. The article refers to a demonstration wherein a painter painted with a virtual paint brush, and the brush type would change in accordance with finger position. The article further discusses a

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demonstration wherein a virtual hand conducted a virtual orchestra in accordance with movements of the user's hand.

5. Exhibit D is an article which appeared in Info World magazine on June 9, 1986. It is believed that the article also reports on a demonstration made at the consumer electronics show referred to in our previous Declaration. The article specifically describes the demonstrated device wherein sensors in front of a computer and in a glove sense where the user's hand is in three-dimensional space, as well as the tilt of the hand and whether the fingers are bent or straight. The article refers to a demonstration made by inventor Jaron Lanier wherein a virtual hand could grab the image of a bouncing ball in mid flight in response to movements of the user's hand.

6. It is believed that the foregoing exhibits independently prove that the subject matter disclosed in the above-identified patent application was sufficiently reduced to practice to constitute an invention date prior to the Fisher, et al. reference cited by the Examiner.

Having been warned that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent resulting therefrom, we further declare that all statements made herein of our own knowledge are

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true, and that all statements made on information and belief are believed to be true.

Dated: April 27, 1990

Thomas G. Zimmerman  
THOMAS G. ZIMMERMAN

Dated: \_\_\_\_\_, 1990

JARON LANIER

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